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STATE OF MICHIGAN

DEPARTMENT OF NATURAL RESOURCES

LANSING



REBECCA A. HUMPHRIES  
DIRECTOR

August 11, 2008

The Honorable Michelle McManus, Chair  
Senate Appropriations Subcommittee  
on Natural Resources  
S-2 Capitol Building  
P.O. Box 30036  
Lansing, Michigan 48909-7536

The Honorable Michael Lahti, Chair  
House Appropriations Subcommittee  
on Natural Resources  
S-1489 House Office Building  
P.O. Box 30014  
Lansing, Michigan 48909-7514

Dear Senator McManus and Representative Lahti:

Pursuant to Section 502, PA 122 of 2007, a report of the Department of Natural Resources' (DNR) bovine tuberculosis eradication efforts, during the third quarter of Fiscal Year 2007-08, is attached.

If you have any questions, please feel free to contact me.

Sincerely,

Sharon M. Schafer, Chief  
Budget and Support Services  
517-335-3276

Attachment

cc: Senate Appropriations Subcommittee Members  
House Appropriations Subcommittee Members  
Ms. Jessica Runnels, Senate Fiscal Agency  
Dr. Kirk Lindquist, House Fiscal Agency  
Mr. Robert Emerson, State Budget Director, Department of  
Management and Budget (DMB)  
Mr. Jacques McNeely, DMB  
Ms. Jennifer Harrison, DMB  
Director Rebecca Humphries, DNR  
Ms. Arminda Koch, Resource Management Deputy, DNR  
Mr. Rodney Stokes, Chief of Staff, DNR  
Mr. Daniel Eichinger, Legislative Liaison, DNR  
Mr. Douglas Reeves, DNR  
Mr. Gary Hagler, DNR  
Ms. Jane Schultz, DNR

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**Department of Natural Resources  
Bovine Tuberculosis Program  
Fiscal Year 2007- 08 Third Quarter Summary  
April 1, 2008 - June 30, 2008**

Source: Wildlife Health Section

**Disease Surveillance in Wildlife**

During the third quarter, surveillance activities conducted by the Department of Natural Resources (Department) for bovine tuberculosis (TB) continued statewide and were primarily concentrated among road-killed deer and deer taken through the issue of disease control permits (DCPs). The Wildlife Disease Laboratory (WDL) tested 299 white-tailed deer, 2 elk, and 2 moose for bovine TB. All tested negative for the disease.

**Disease Control Permit Program**

***Background Information***

- An amendment was made to Section 5.7 of the Wildlife Conservation Order by the Natural Resources Commission in November 2007 to extend the DCP program to any private landowner who owns property 1) in a county where TB is found in any species, or 2) within a 30-mile radius of a location where TB is found in any species.
- In particular, participation in the DCP program is being offered to private landowners in Deer Management Unit (DMU) 452. Consequently, a letter was sent to many hunt clubs and larger landowners in DMU 452 in December of 2007 to inform them about this additional opportunity to harvest deer.
- DCPs have been available for several years on a request basis, but some cattle producers have expressed difficulty in getting the permits in a timely manner when needed.
- In early January 2008, the Wildlife Disease Lab (WDL) mailed out DCPs to all cattle producers in Alcona, Alpena, Montmorency, Oscoda and Presque Isle Counties with more than six head of cattle.
  - This initiative was designed to make it simpler for cattle producers in areas where TB is established to control deer numbers on their farms. Use of the DCPs may help reduce the risk of transmission of TB from free-ranging deer to cattle.
  - Each producer was initially mailed five kill tags, with more available upon request when the original five were filled. DCPs are valid for a year and may be used year-round.
  - Current plans are to make the DCPs available in this manner for three years and then evaluate the effectiveness of the program.
- Due to the recent finding of a TB-positive wild deer in Shiawassee County, letters explaining the program were mailed to Shiawassee and Clinton Counties' cattle producers located within a ten-mile radius of where the TB-positive deer was located.
- The distribution of all DCPs is being coordinated by the WDL. A dedicated phone number (517) 336-5054 and e-mail address (DEPARTMENT-DCP@michigan.gov) have been established and are monitored during normal business hours.

**2008 Laboratory Results for Deer Taken Through DCP Program (Jan.1 - Jul. 31)**

<b>County</b>	<b>Positive</b>	<b>Negative</b>	<b>Total Tested</b>
Alcona		28	28
Alpena	2 (DMU 452)	167	169
Antrim		29	29
Charlevoix		35	35
Cheboygan		9	9
Emmet		12	12
Iosco		27	27
Montmorency	1 (DMU 452)	72	73
Ogemaw		12	12
Oscoda		20	20
Otsego		5	5
Presque Isle		41	41
Shiawassee		21	21
<b>TOTAL</b>	<b>3 (DMU 452 )</b>	<b>478</b>	<b>481</b>

**Regulation Enforcement Activities**

Comments conservation officers frequently receive regarding baiting and feeding violations are that the baiting or feeding violations will stop "when we get TB" or "if we get TB." Many do not realize that TB is real, and it is in the affected area. Public support appears to be lessening.

The regulation enforcement activities outlined below cover the second and third quarters of 2008 (January 1 - June 30). Large winter feed piles are down in number, but violations with smaller amounts still exist. The majority of these feed piles are directly behind residences, with the amount of feed indicating recreational viewing was the purpose.

***Bait/Feeding Complaints:***

- 68 complaints were received in the reporting period (Source: Biweekly and RAP reporting systems for LED Districts 3 & 5).

***Bait Citations Issued:***

- 21 prosecutions were initiated in the reporting period (Source: Biweekly and RAP reporting systems for LED Districts 3 & 5).

***Directed Patrols:***

- Aircraft assisted on group patrols for winter feeding violations on 11 different occasions, with repeat locations often found. The offenders commented that they were expecting a visit after they observed the aircraft fly over.

## **Research Activities - Proposals Under Development**

### **Title: Evaluating Acceptance of Free-Ranging White-Tailed Deer Bovine Tuberculosis Management Strategies – Primary Investigator: Brent Rudolph, Big Game Specialist, Department of Natural Resources**

Managers have identified the need to develop publicly-acceptable control policies to maintain or improve efforts to eradicate an infection of bovine TB from white-tailed deer (WTD) in Michigan. A better understanding of factors influencing hunter compliance with baiting regulations and decisions to harvest deer was identified as a critical knowledge gap which challenges efforts to maintain and enhance TB control strategies. Research collaboration between the Department and Michigan State University (MSU) was initiated to examine these factors. The Michigan Department of Agriculture (MDA) will provide funding support to gain initial insights for this evaluation and will provide a point of contact to the Department who will be responsible for coordinating communications related to this portion of the project. The Department and MSU will conduct one or more workshops and meetings with wildlife managers, law enforcement personnel, agriculture and recreation industry professionals, and small groups of stakeholders, to gather data as part of this assessment. Modeling efforts will also be conducted to characterize the degree to which past modifications to deer hunting regulations have influenced harvest levels, while controlling for factors that influence hunting access and deer distribution, such as habitat, land ownership, and development patterns. This effort represents a unique and exciting multi-agency and university collaboration to engage the public in order to understand factors limiting the support for and effectiveness of TB management strategies.

A final project proposal has been submitted to the Michigan Department of Agriculture (MDA) and the Department. MDA and the Department developed a draft Memorandum of Understanding (MOU) in which MDA will provide funding in support of the first year of this research and a point of contact for coordinating communications related to the assessment. The MOU is expected to be finalized in early July. The Department will collaborate with MSU in conducting the research, completing reports, and disseminating results. A contract between the Department and MSU has also been developed to run from July 1, 2008 through September 30, 2010 to carry out portions of the research.

On May 19, a presentation titled "A review of criminological theory to identify strategies to enhance bovine tuberculosis eradication efforts in Michigan" was accepted to be delivered at the 15th Annual Conference of The Wildlife Society this November. The presentation will provide background and review preliminary results of a portion of this research.

### **Other Research Collaboration - Brent Rudolph, Big Game Specialist, Department of Natural Resources**

- June 26: Met with staff and student interns with MDA to assist in planning a student project to assess Shiawassee County producer attitudes towards bovine tuberculosis.

- June 27: Met with a student intern with the Department's Law Enforcement Division to assist in planning a student project to assess deer baiting regulation violations and enforcement.

**Title: Bovine Tuberculosis Spatial Model for White-tailed Deer – Primary Investigator: Dr. Dan O'Brien, Wildlife Veterinarian, Department of Natural Resources**

The modeling approach is an adaptation to Michigan WTD of a spatially-explicit, stochastic model developed for TB in New Zealand brushtail possums. Iteratively applying this model over time, the dynamics of WTD and the expansion or control of TB can be predicted. The model constructs a true spatially-explicit framework rather than applying a non-spatial model to a lattice of cells representing contiguous geographic areas. The result is a continuous time/continuous space model that uses density surfaces to describe both host population density and TB transmission risk. By allowing these to vary continuously across the landscape, their values can be estimated at any point on the geographic and time surface.

As of February 2008, a preliminary prototype of the model had been completed. Discussions between the principal investigators in March 2008 yielded an approach to make the model more specific to Michigan TB management issues. It is anticipated that the principals will meet in the summer of 2008 for initial training and to evaluate the final prototype, with a final working model anticipated by the end of Fiscal Year 2008.

**Meetings Attended**

**Meetings attended by Dr. Steve Schmitt, Department of Natural Resources Wildlife Veterinarian, Wildlife Health Section Supervisor**

- Meetings with Farm Bureau on 4/5/08 and 4/12/08.
- TB meeting in Atlanta on 4/23/08.
- Disease control permit meeting in Gaylord on 4/21/08 and at the RAM Center on 6/23/08.
- TB Advisory Committee meetings with the United States Department of Agriculture on 4/7/08, 5/2/08, and 6/17/08.
- TB meeting with the Director of the Department on 4/4/08 and 5/7/08.
- Trilateral meeting in Mexico on 5/12-5/17/08.
- Midwest Fish and Wildlife Health Committee meeting in Twin Harbors, MN on 5/19-5/21/08.
- Legislative TB strategy meeting on 6/2/08.

**Meetings and other activities of Dr. Dan O'Brien, Department of Natural Resources Wildlife Veterinarian:**

- MDA meeting on 4/2/08 - Disease regulation enforcement for captive cervids.
- Disease control permit meeting on 4/21/08.
- Legislative TB strategy meeting on 6/2/08.
- Conference call with federal General Accounting Office on 6/11/08 regarding veterinary resources for wildlife disease outbreaks.

- TB Scientific Advisory Committee meeting on 6/24/08.
- Lecture provided on 4/7/08 for a course on government and corporate veterinary practice, Institutional Practice Clerkship – MSU College of Veterinary Medicine.
- Graduate Committee meeting for M. Cosgrove on 6/2/08 – Vaccination strategies for TB in deer, Fisheries and Wildlife Department.
- Corrected galley proofs for "Estimating the true prevalence of *M. bovis* in free-ranging elk," in press at Journal of Wildlife Diseases, 6/30/08.
- Revised manuscript "Evaluation of blood assays for *M. bovis* in white-tailed deer," submitted to Journal of Wildlife Diseases, 6/23-6/30/08.

**Meetings and other activities of Elaine Carlson, Department of Natural Resources Biologist, Mio, MI**

- Provided TB update to participants of the Southeastern Cooperative Wildlife Disease Study Group in Athens, GA and attended a field demonstration of the wildlife risk mitigation questionnaire.
- Continued to talk with farmers and land owners regarding disease control permits and collect a few deer heads from the permits.

**Meetings and other activities by Earl Flegler, Department of Natural Resources Biologist, Rose Lake - East Lansing, MI**

- Presented a wildlife update at the Shiawassee County Bovine TB Producer Update with David Dominic at Bennington Township Hall on 4/17/08.
- Answered questions/phone calls regarding disease control permits and TB from farmers and landowners.
- Coordinated collection of deer heads for TB sampling from disease control permits, car-deer accidents, and out-of-season shooting permits.
- Planned locations/staffing needs for fall 2008 deer check/deer head collections and communicated with area deer processors.